

Hatch Progress Report

02 Feb 2015

AEA Grant 7310045

Application of Composite Flywheels

Grantee: Hatch

Distribution

Alan P. Baldivieso

Progress Report - 12 Dec 2014 to 02 Feb 2015

1. Deliverables Submitted

Final Report

2. Budget

Final invoice for \$49,344 of grant funding is outstanding, pending final invoice from ACEP.

3. Schedule Status

- Final testing was completed first two weeks of January.
- Final report is complete and will be submitted 2-Feb-2015.
- Decommissioning of the flywheel equipment at ACEP lab is to be completed in February.

4. Percent Complete

WBS	TASK	% complete
1101	50% test facility fee	100%
1200	Initial Site Visit and Data Collection	100%
1300	Analyze data, models, & define design criteria	100%
1400	Develop core control algorithm for flywheel control	100%
1500	Modeling and simulation of the wind-diesel-flywheel system and flywheel sizing	100%
1600	Complete conceptual integration study report	100%
2100	Specification of components, controls, & system architecture	100%
2201	Controller Procurement	100%
2300	Control hardware programming	100%
2400	In-house performance testing	100%
3101	Procure flywheel	100%



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3201	Package and ship flywheel to ACEP test facility (flywheel return still reqd)	50%
3304	Install Flywheel at test facility	100%
3400	Establish and program wind emulator power and load bank profiles	100%
3500	Controller and lab set up	100%
3601	ACEP test facility fee	70%
3700	System Testing	100%
3800	Data acquisition and analysis; prepare draft report	100%
3110	Complete final test report	100%

5. Work Progress

WBS	TASK	WORK COMPLETED
2300	Control hardware programming	Work complete, over budget.
2400	In-house performance testing	Work complete, under budget.
3101	Procure flywheel	Complete.
3201	Package and ship flywheel to ACEP test facility	Complete except for return shipping.
3304	Install Flywheel at test facility	Work complete.
3500	Controller and lab set up	Work complete, under budget.
3601	ACEP test facility fee	Final invoice pending.
3700	System Testing	Phase I testing complete, on budget. Phase II testing occurred 5-Jan to 16-Jan and complete.
3800/ 3110	Data analysis, draft report and final report.	Final report is complete and to be submitted 2-Feb-2015

6. Future Work

WBS	TASK	WORK
3201	Decommission Flywheel and controller	Controller has been decommissioned and returned to Hatch. Flywheel to be decommissioned in February.

David Delves